

### Remarks

Claims 1-13 and 14-25 were pending in this application, from which claim 13 has been canceled without prejudice or disclaimer of the subject matter therein. Claims 1-12 and 16-25 are rejected. It is respectfully submitted that the pending claims define allowable subject matter.

Initially, the examiner is thanked for indicating claims 13-15 to be allowable if rewritten in independent form. While Applicant continues to maintain that all of the pending claims are patentable over the prior art, to facilitate prosecution, the limitations of claim 13 have been added to independent claims 1 and 17. In addition, claims 14 and 15 have been rewritten in independent form. Claims 13-15 were indicated allow in the first Office Action and thus claims 14 and 15 are rewritten in independent form by add thereto, the limitations of claim 1 in its form as examined in the 1<sup>st</sup> Office Action. The foregoing amendments are believed to render moot the rejections of claims 1-12 and 16-20.

Claims 21-25 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Williams (U.S. Patent No. 6,356,550) in view of Boily (U.S. Patent App. No. 2004/0001454). Applicants traverse these rejections for reasons set forth hereafter.

Claim 21 recites a system for switching multi-rate communications. The system includes a time-space switch element configured to receive at least a first data collection having a common first type, wherein the first data collection includes m sets of data, and a buffer from which p sets of data of the first data collection are communicated to a first set of p timeslots and from which at least one overflow set of data from the first data collection is communicated to at least one overflow timeslot, wherein p is less than m.

As stated in the Office Action, Williams does not describe or suggest a time-space switch element configured to receive at least a first data collection or a buffer from which p sets of data of the first data collection are communicated. However, the Office Action maintains that Boily makes up for this deficiency of Williams. Applicants disagree. Even when combined, Boily and Williams do not render obvious the claimed time-space switch element structure.

Boily does NOT describe a time-space switch element that communicates to at least one overflow timeslot at least one overflow set of data from the first data collection, wherein p is less

than m as further recited in Claim 21. Rather, Boily only describes a single timeslot interchange switch that includes an ingress stage, an egress stage and a cross-connect stage coupled between the ingress stage and the egress stage. The ingress stage receives data from an input and holds the data in a buffer. The buffer is accessible to the cross-connect stage. The egress stage also includes an egress buffer which is also accessible to cross-connect stage.

Applicants specification describes a time-space switch element to include at least one stage that is time switched and at least one stage that is space switched. For example, a 3 stage example is disclosed that includes first and third stages that are time switched, and the middle stage that is space switched. Williams does not describe or suggest a time-spaced switch element and Boily merely describes a single time-switched element. Boily does not describe a space-switched element as asserted in the Office Action. Rather, the ingress buffer 30, the cross-connect 28, and the egress buffer 32 are all part of a single time slot interchange 10 as shown and described by Boily. Accordingly, even when the teachings of Williams and Boily are combined, they do not teach or suggest the limitations of claim 21.

Claims 22 and 23 depend from independent Claim 21. When the recitations of Claims 22 and 23 are considered in combination with the recitations of independent Claim 21, dependent Claims 22 and 23 are likewise considered to be patentable over the cited art.

Claim 24 recites a system for switching multi-rate communications. The system includes a time-space switch element configured to receive at least a first, a second, and a third data collection, wherein each of the first, the second, and the third data collection have a common first type, and each of the first, the second, and the third data collection include m sets of data, and a buffer from which p sets of data from the first data collection are communicated to a first set of p timeslots, from which p sets of data from the second data collection are communicated to a second set of p timeslots, from which p sets of data from the third data collection are communicated to a third set of p timeslots, from which an mth set of data from the first data collection are communicated to a fourth set of p timeslots, from which an mth set of data from the second data collection are communicated to the fourth set of p timeslots, and from which an mth set of data from the third data collection are communicated to the fourth set of p timeslots.

As discussed, neither Williams nor Boily describe or suggest a system for switching multi-rate communications that includes a time-space switch element. Moreover, Williams does not describe that an  $m$ th sets of data from the first data collection, the second data collection, and the third data collection are each communicated to a fourth set of  $p$  timeslots. Rather, Williams describes and illustrates in the figures that each data collection is communicated to separate time slots. For example, as shown in Figure 2J and 2K, Williams illustrates three data collections, i.e. 3 VT2 data collections shown as X, Y, and Z, that are each communicated to separate timeslots. Williams does not show or describe that any of the X, Y, and Z, data collections are each communicated to a fourth set of  $p$  timeslots as recited in Claim 24. Accordingly, claim 24 is submitted to be patentable over Williams et al. Moreover, Boily does not make up for the deficiencies of Williams. Accordingly, Claim 24 is submitted to be patentable over Williams in view of Boily.

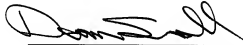
Claim 25 depends from independent Claim 24. When the recitations of Claim 25 are considered in combination with the recitations of independent Claim 24, dependent Claim 24 likewise is considered to be patentable over the cited art. Moreover, it is respectfully submitted that dependent Claim 25 recites additional features that are neither anticipated nor rendered obvious by the prior art.

Finally, it is noted that the Information Disclosure Statement submitted on December 11, 2003 includes a typographical error. The IDS of December 11th correctly listed a US patent to Horlyck issuing on August 12, 2003. However, the Horlyck patent was inadvertently referenced as U.S. Patent 6,606,870, whereas the Horlyck patent should have been properly listed as U.S. Patent 6,604,870. Applicant respectfully requests that the Examiner correct and re-initial the 1449 form with the next action on the merits. For convenience a replacement 1449 form is submitted herewith.

In view of the foregoing amendments and remarks, all the Claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,

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